

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A high power light emitting diode package comprising:
an insulation main body having an opening to a bottom surface;
at least two lead terminals fixed to the main body; and
at least two heat sinks of electrically and thermally conductive metallic materials, the heat sinks being separated from each other and fixed to the main body, wherein a lower portion of each of the at least two heat sinks is exposed to the outside of the bottom surface of the main body through the opening of the main body.
2. (Original) The package of claim 1, wherein each of the at least two heat sinks has a reflective surface extended from an upper surface thereof.
3. (Original) The package of claim 1, wherein the at least two heat sinks are a pair.
4. (Original) The package of claim 3, further comprising: at least one light emitting diode die mounted on upper surfaces of the at least two heat sinks, the die being directly and electrically connected to the heat sinks through a surface of the die.
5. (Original) The package of claim 4, further comprising: bonding wires electrically connecting the at least two lead terminals, the at least two heat sinks and the at least one light emitting diode die.

6. (Original) The package of claim 4, further comprising: a lens attached to the main body, the lens enclosing the at least one light emitting diode die.

7. (Original) The package of claim 6, wherein the lens includes an optically transparent material which is directly contacted with the at least one light emitting diode die.

8. (Original) The package of claim 4, further comprising: a fluorescent material converting the wavelength of light emitted from the at least one light emitting diode die.

9. (Original) The package of claim 1, further comprising:
light emitting diode dies mounted on the respective heat sinks, the light emitting diode dies emitting different wavelengths of light.

10. (Original) The package of claim 9, wherein the at least two lead terminals include: lead terminals electrically connected to the at least two heat sinks respectively; and a common lead terminal electrically connected to all of the at least two heat sinks.

11. (Original) The package of claim 10, further comprising: an additional heat sink; and a zener diode mounted on the additional heat sink.

12. (Original) The package of claim 9, wherein the light emitting diode dies include light emitting diode dies emitting a first wavelength of light, a second wavelength of light and a third wavelength of light, respectively.

13. (Previously Presented) The package of claim 12, wherein the first wavelength, the second wavelength and the third wavelength are red wavelength, green wavelength and blue wavelength, respectively.

14. (Original) A light emitting diode system comprising:
the light emitting diode package according to claim 10 or claim 11; and
a controller for controlling the electric power supplied to the light emitting diode package, wherein the controller controls the amount of the current supplied to the respective heat sinks.

15. (Previously Presented) The package of claim 1, further comprising at least one septum formed in a single body along with the main body to separate the at least two heat sinks.

16. (Previously Presented) A high power light emitting diode package comprising:
an insulation main body;
at least two lead terminals fixed to the main body;
at least two heat sinks of electrically and thermally conductive materials, the heat sinks being separated from each other and fixed to the main body, each of the at least two heat sinks having an upper surface and a lower surface, the lower surface of each of the at least two heat sinks being relatively wider than the upper surface of each of the at least two heat sinks; and
a light emitting diode die mounted on one of the upper surfaces of the heat sinks, the light emitting diode die having a lower surface facing the upper surface of each of the at least two heat sinks,

wherein the upper surface of each of the at least two heat sinks is wider than the lower surface of the light emitting diode die, so that the light emitting diode die mounted partly on a portion of the heat sink.

17. (Previously Presented) The package of claim 1, wherein the at least two heat sinks each consist of either copper, gold, silver, or aluminum.

18. (Previously Presented) The package of claim 16, wherein the at least two heat sinks each consist of either copper, gold, silver, or aluminum.